ORDER NO. DAD84040076S0

Service Manual

Turntable System

SL-1200MK2

[M], [MC],
[E], [EK], [XL], [EG], [EB], [EH],
[EF], [Ei], [XA], [PA], [PE], [PC]

SL-1210MK2

[E], [EG], [EH]

Areas

* [M]	is available in the U.S.A.
* [MC]	is available in Canada.
* [E]	is available in Switzerland and Scandinavia.
* [EK]	is available in United Kingdom.
* [XL]	is available in Australia.
* [EG]	is available in F.R. Germany.
* [EB]	is available in Belgium.
* [EH]	is available in Holland.
* [EF]	is available in France.
* [Ei]	is available in Italy.
* [XA]	is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
* [PA]	is available in far East PX.
* [PE]	is available in European Military.
* [PC]	is available in European Audio Club.

*SL-1200MK2 is the model for silver type.
*SL-1210MK2 is the model for black type of SL-1200MK2.

Please use this manual together with the service manual for Model No. SL-1200MK2/1210MK2.

SPECIFICATIONS\ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ
DISASSEMBLY INSTRUCTIONS\ИНСТРУКЦИЯ ПО РАЗБОРКЕ
REPLACEMENT PARTS LIST\СПИСОК ЗАПАСНЫХ ЧАСТЕЙ
ADJUSTMENT POINTS\ТОЧКИ РЕГУЛИРОВКИ
MEASUREMENTS AND ADJUSTMENTS\ИЗМЕРЕНИЯ И РЕГУЛИРОВКИ
RESISTORS AND CAPACITORS\СОПРОТИВЛЕНИЯ И КОНДЕНСАТОРЫ
REPLACEMENT PARTS LIST\СПИСОК ЗАПАСНЫХ ЧАСТЕЙ
EXPLODED VIEW\СБОРОЧНЫЕ ЧЕРТЕЖИ
SCHEMATIC DIAGRAM\ПРИНЦИПИАЛЬНАЯ СХЕМА
BLOCK DIAGRAM\БЛОК - СХЕМА
PACKING \УПАКОВОЧНЫЕ МАТЕРИАЛЫ

Technics

Matsushita Engineering and Service Company
50 Meadowland Parkway,
Secaucus. New Jersey 07094

Panasonic Hawaii Inc.
91-238 Kauhi St. Ewa Beach
P.O. Box 774
Honolulu, Hawaii 96808-0774

Matsushita Electric of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Panasonic Sales Company, Division of Matsushita Electric of Puerto Rico, Inc.
Ave, 65 De Infanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

Panasonic Tokyo
Matsushita Electric Industrial Co., Ltd.
1-2, 1-chome, Shibakoen, Minato-ku, Tokyo 105 Japan

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

Specifications

Specifications are subject to change without notice for further improvement.
Weight and dimensions shown are approximate.

■ General

Power supply:	120V, AC 60 Hz (For [M], [MC] areas) ~110-120/220-240V, 50 or 60 Hz (For other areas)
Power consumption:	14 W (For [M], [MC] areas) 13.5 W (For other areas)
Dimensions:	45.3 x 16.2 x 36 cm
(W x H x D)	(17-27/32" x 6-19/64" x 14-11/64")
Weight:	12.5 kg (27.6 lb)

Turntable section

Type:	Quartz direct drive Manual turntable
Dirve method:	Direct drive
Motor:	Brushless DC motor
Turntable platter:	Aluminum diecast Diameter 33.2 cm (13-5/64") Weight 2 kg (4.4 lb)
Turntable speeds:	33-1/3 rpm and 45 rpm
Starting torque:	1.5 kg · cm (1.3 lb · in)
Build-up characteristics:	0.7 s. from standstill to 33-1/3 rpm
Braking system:	Electronic brake
Wow and flutter:	0.01% WRMS* 0.025% WRMS (JIS C5521) ± 0.035% peak (IEC 98A Weighted)

* This rating refers to turntable assembly alone, excluding effects of record, cartridge or tonearm, but including platter. Measured by obtaining signal from built-in frequency generator of motor assembly.

Rumble:	–56 dB (IEC 98A Unweighted) –78 dB (IEC 98A Weighted)

■ Tonearm section

Type:	Universal
Effective length:	230 mm (9-1/16")
Arm height adjustment range:	0 – 6 mm
Overhang:	15 mm (19/32")
Effective mass:	12 g (without cartridge)
Offset angle:	22°
Friction:	Less than 7 mg (lateral, vertical)
Tracking error angle:	Within 2°32' (at the outer groove of 30 cm (12") record Within 0°32' (at the inner groove of 30 cm (12") record
Stylus pressure adjustment range:	0 – 2.5 g
Applicable cartridge weight range:	6 – 10 g 13.5 – 17.5 g (including headshell)
(with auxiliary weight):	9.5 – 13 g 17 – 20.5 g (including headhsell)
(with shell weight):	3.5 – 6.5 g 11 – 14 g (including headshell)
Headshell weight:	7.5 g

CHANGES

■ DISASSEMBLY INSTRUCTIONS

- **How to remove the bottom cover and bottom base.**

1. Remove the turntable mat and turntable.
2. Turn over the body on a soft cloth thaking care not to damage the dust cover.
3. Remove the insulators and the 21 setscrews **(Fig. 1 : ❶,❷,❸)** of the bottom cover.
4. Remove the 6 setscrews **(Fig. 2 : ❹)** of the bottom base.

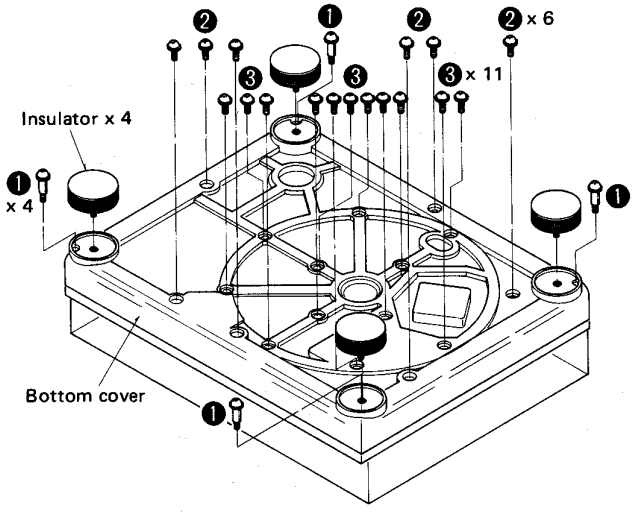


Fig. 1

- **How to remove the hinge case**

1. Remove the bottom cover. **(Refer to "How to remove the bottom cover".)**
2. Remove the 4 setscrews **(Fig. 2 : ❺)** of the hinge case bracket.
3. Remove the 4 setscrews **(Fig. 2 : ❻)** of the hinge case.

Note: The other disassembly procedure are the same as for before-change sets.

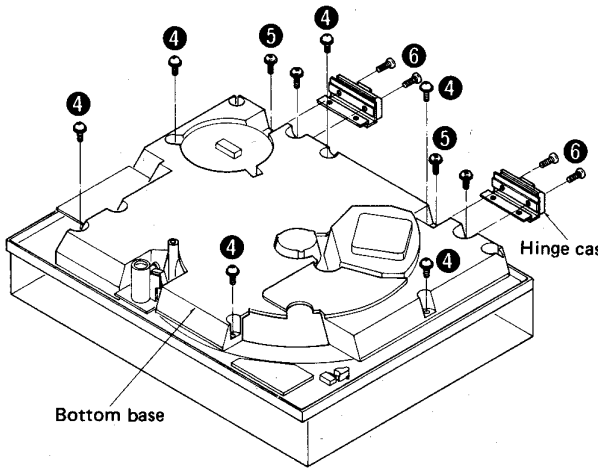


Fig. 2

■ REPLACEMENT PARTS LIST

Notes:

1. This parts list mentions only the difference between before and after change of SL-1200MK2/1210MK2.
2. Ⓚ-marked parts are used only for SL-1210MK2 (black type). And O-marked parts are used for SL1200MK2 (silver type).
3. Parts other than Ⓚ- and O-marked are used for both SL-1210MK2 and SL-1200MK2.
4. The "Ⓢ" mark is service standard parts and may differ from production parts.

Areas

* [M] is available in the U.S.A.
* [MC] is available in Canada.
* [E] is available in Switzerland and Scandinavia.
* [EK] is available in United Kingdom.
* [XL] is available in Australia.
* [EG] is available in F.R. Germany.
* [EB] is available in Belgium.
* [EH] is available in Holland.
* [EF] is available in France.
* [Ei] is available in Italy.
* [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
* [PA] is available in far East PX.
* [PE] is available in European Military.
* [PC] is available in European Audio Club.

Ref. No.	Change of Part No.		Part Name & Description	Per Set (Pcs.)	Remarks
	SL-1200MK2 (Before Change)	**SL-1200MK2/1210MK2 (After Change)**			
INTEGRATED CIRCUIT					
IC302	SVITC4011BP	MN4011B	NAND Gate	1	
TRANSISTOR					
Q1	2SD389A–Q	2SD1265	Regulator	1	
DIODES					
D1	SVDS1RBA40	SVDS1RBA20Z	Rectifier	1	⚠
D201, 202	SVDSR–105C	SVDPR3902S–9	Speed Indicator	2	
D203 ~ 206	SVDEBR5505S	SVDSLH54VT3	Strobe	4	
D401	SVDGL–9PG2	SVDGL–9NG2	Pitch Indicator	1	
CRYSTAL					
X201	SVQU306115	SVQMS4193	4.193 MHz, Oscillator	1	
VARIABLE RESISTORS					
VR301	EVMH2GA00B53	EVMH1GA00B23	Pitch Control Adjustment, 2kΩ (B)	1	
VR303	EVBJ05C19ABE	SFDZ122N11	Pitch Control	1	
SWITCHES					
S203	SFDSSS5GL13C	SFDSSS01GL13	Start/Stop	1	
S601	SFDSSS5GL13S	SFDSSS5GL13P	Power	1	⚠
TRANSFORMER					
T1	SLT60EU7B	SLT66DTL3A [M]	Power Source	1	⚠
T1	SLT60E31C	SLT66DT14C [MC]	Power Source	1	⚠
T1	SLTF5900	SLT66DTE13A [Other areas]	Power Source	1	⚠

Ref. No.	Change of Part No. SL-1200MK2 (Before Change) → SL-1200MK2/1210MK2 (After Change)		Part Name & Description	Per Set (Pcs.)	Remarks
RESISTORS					
R4	ERD25FJ561	ERD25FJ471	Carbon, 1/4W, 470Ω	1	Ⓢ
R209	ERD25TJ154	ERD25TJ334	Carbon, 1/4W, 330kΩ	1	Ⓢ
R211	ERD25FJ103	ERD25FJ472	Carbon, 1/4W, 4.7kΩ	1	Ⓢ
R212	ERD25FJ121	ERD25FJ151	Carbon, 1/4W, 150Ω	1	Ⓢ
R222	Addition	ERD25FJ391	Carbon, 1/4W, 390Ω	1	Ⓢ
R301	ERO25CKF3301	ERO25CKF2701	Metal Film, 1/4W, 2.7kΩ	1	Ⓢ
R304	ERD25FJ152	ERD25FJ561	Carbon, 1/4W, 560Ω	1	Ⓢ
R401	Addition	ERD50FJ152	Carbon, 1/2W, 1.5kΩ	1	Ⓢ
R601	ERD25FJ4R7	ERD50FJ4R7	Carbon, 1/2W, 4.7Ω	1	⚠ Ⓢ
CAPACITORS					
C5, 6	Addition	ECQM1223KZ	Polyester, 125V, 0.022μF	1	⚠
C104 ~ 107	ECQM1H104KZ	ECQM1H104JZ	Polyester, 50V, 0.1μF	4	Ⓢ
C109, 110	ECQM1H104KZ	ECQM1H104JZ	Polyester, 50V, 0.1μF	2	Ⓢ
C111	ECQM1H562KZ	ECQM1H562JZ	Polyester, 50V, 0.0056μF	1	Ⓢ
C204	ECQM1H473KZ	ECQM1H473JZ	Polyester, 50V, 0.047μF	1	Ⓢ
C210	ECQM1H224KZ	ECQM1H224JZ	Polyester, 50V, 0.22μF	1	Ⓢ
C211	ECQM1H473KZ	ECQM1H473JZ	Polyester, 50V, 0.047μF	1	Ⓢ
C217 ~ 219	Addition	ECKD1H104ZF	Ceramic, 50V, 0.1μF	1	Ⓢ
C301	ECQK1123FZ	ECQK1333GZ	Polyester, 125V, 0.033μF	1	
C302	ECQK1123FZ	ECQK1682GZ	Polyester, 125V, 0.0068μF	1	
C305	ECQM1H122KZ	ECQM1H122JZ	Polyester, 50V, 0.0012μF	1	Ⓢ
CABINET and CHASSIS PARTS					
9	SFUP122–12	Deletion	----------	0	
10	SFAC122–01	SFAC122–01	Cabinet (Silver)	1	○
		SFAC124S01	Cabinet (Black)	1	Ⓚ
25	SFXB122–02	SFXB122–06	Boss, Drive	1	
33	SFQA001–02	SFQA122–03	Spring	1	
36	SFUP025–01	SFUP122–16 [M, MC, PA, PE, PC]	Bracket, AC Cord	1	
	SFUP025X01	SFUP122X01 [Other areas]	Bracket, AC cord	1	
38	SFUP132–03	SFGC122–03	Cushion	2	
40	SFUP122–10	Deletion	----------	0	
42	SFKK122–03	SFKK122–03	Plate (Silver)	1	
		SFKK124S01	Plate (Black)	1	
48	SFAU122–01	SFAU122–02	Bottom Base	1	
48–1	Addition	SFAU122–03	Bottom Cover	1	
49	SFUP122–05	SFUP122–23	Supporter (A), Hinge	2	
50	SFUP122–04	SFUP122–24	Supporter (B), Hinge	2	
51	SFUM170–07	SFUMM02N04	Case, Hinge	2	
55	SFNN122M01	SFNN122M10 [M]	Name Plate	1	○
	SFNN122C01	SFNN122C10 [MC]	Name Plate	1	○
	SFNN122S01	SFNN122S10 [E]	Name Plate	1	○
	SFNN122L01	SFNN122G10 [EK, XL]	Name Plate	1	○
	SFNN122X01	SFNN122X10 [XA]	Name Plate	1	○
	Addition	SFNN122P10 [PA, PE]	Name Plate	1	○
	Addition	SFNN122P11 [PC]	Name Plate	1	○
	SFNN122N01	SFNN122N10 [Other areas]	Name Plate	1	○
	Addition	SFNN124S10 [E]	Name Plate	1	Ⓚ
	Addition	SFNN124Q10 [EG, EH]	Name Plate	1	Ⓚ
56	SFX0122–01	Deletion	----------	0	
57	SFX0122–02	Deletion	----------	0	
58	SFAT122–01A	SFATM02N01A	Hinge	1	

Ref. No.	Change of Part No.		Part Name & Description	Per Set (Pcs.)	Remarks
	SL-1200MK2 (Before Change)	SL-1200MK2/1210MK2 (After Change)			
TONEARM PARTS					
62	SFPAM18201K	SFPAM18201K	Tonearm Ass'y (Silver)	1	○
		SFPAM18202K	Tonearm Ass'y (Black)	1	Ⓚ
79	SFPKB17201S	SFPKB17204E	Ring, Arm Base Operation	1	
82	SFGK132–01	SFGK132–01	Cap (Silver)	1	○
		SFGK133S01	Cap (Black)	1	Ⓚ
ACCESSORIES					
A1	SFNU122M01	SFNU122M06 [M]	Instruction Book	1	
	SFNU122C01	SFNU122C06	Instruction Book	1	
	SFNU122S01	SFNU122S01 [E]	Instruction Book	1	
	SFNU122G01	SFNU122G01 [EK]	Instruction Book	1	
	Addition	SFNU122P01 [PA, PE, PC]	Instruction Book	1	
	SFNU122X01	SFNU122X01 [Other areas]	Instruction Book	1	
A2	SFWE010	SFWE122–01	45 Adaptor	1	
PACKING PARTS					
P1	SFHP122C01	SFHP122C02 [MC, EF]	Carton Box (Silver)	1	○
	SFHP122M01	SFHP122M02 [Other areas]	Carton Box (Silver)	1	○
		SFHP124S02	Carbon Box (Black)	1	Ⓚ
P9	Addition	SPB1083	Polyethylene Bag, Accessories	2	
P10	Addition	SPJ15	Polyethylene Bag, Shell Weight	1	
P11	Addition	SFHZD03M01	Polyethylene Bag, Dust Cover	3	
P12	Addition	SFHZ122–01	Polyethylene Bag, 45 Adaptor	1	
P13	Addition	SPP189	Polyethylene Bag, Cords	2	

■ ADJUSTMENT POINTS

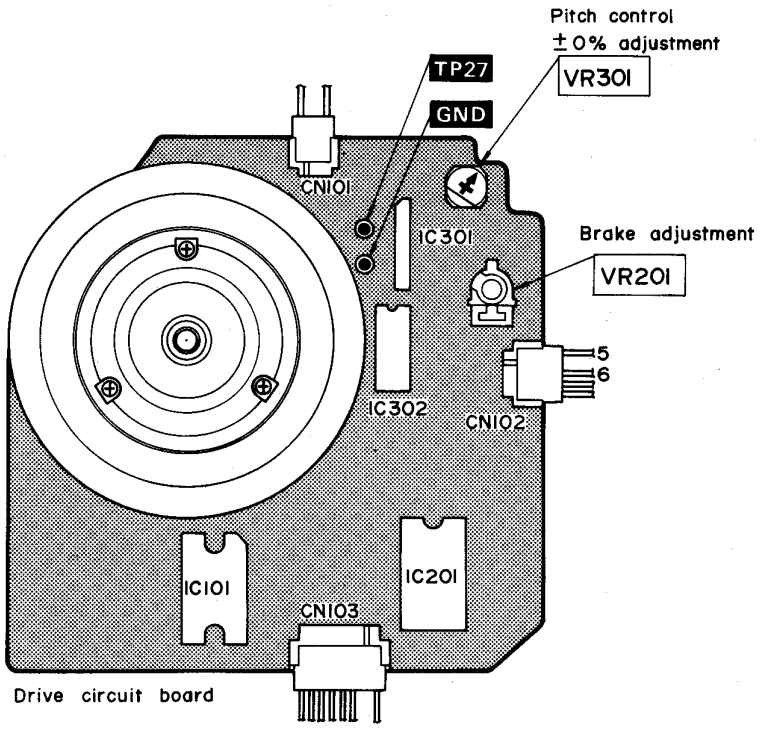


Fig. 3 (Abb. 3)

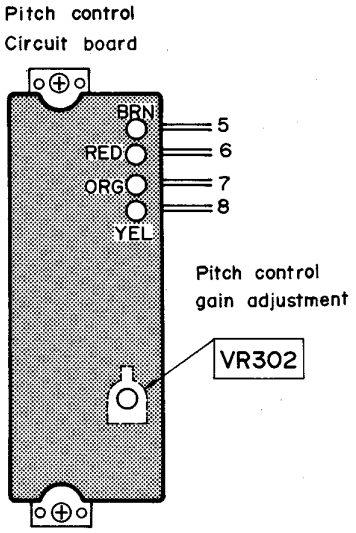


Fig. 4 (Abb. 4)

■ MEASUREMENTS AND ADJUSTMENTS English

- **Conditions of set, and instruments used**

1. Remove the panel cover.
2. Remove the bottom cover (when adjusting the pitch control gain).
3. Frequency counter
4. Tester

	Adjustment	Connection	Parts adjusted	Procedure
1	**Pitch control ± 0% adjustment**	Frequency counter (+) – TP27 (–) – Earth point	VR301 **(Fig. 3)**	1. Connect the frequency counter and turn the power supply ON. 2. Set the pitch control knob to "0". (Indicator lights up.) 3. Adjust VR301 so that the frequency is 262.08 kHz ± 0.05 kHz.
2	**Pitch control gain adjustment**	Tester (+) – CN102 terminal ⑤ (–) – CN102 terminal ⑥	VR302 **(Fig. 4)**	1. Set the pitch control knob to "0". 2. Pull out the connector CN102 of drive P.C.B. 3. Connect the tester to terminals, ⑤ and ⑥ of connector CN102 on the pitch control P.C.B. side. 4. Adjust VR302 so that the resistance value of the tester is 2.7 kΩ ± 0.1 kΩ.
3	**Brake adjustment**	———	VR201 **(Fig. 3)**	1. Adjust VR201 so that the rotation at 33 r.p.m. stops within the angle of 90° ~120° after depressing the stop button.

■ RESISTORS AND CAPACITORS

Notes:
1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
3. The "Ⓢ" mark is service standard parts and may differ from production parts.
4. Bracketed indications in Ref. No. colum specify the area. Parts without these indications can be used for all area.
5. The unit of resistance is Ω (ohm). K = 1000Ω, M = 1000kΩ
6. The unit capacitance is μF (microfarad). P = 10^{-6} μF

Areas

* [M] is available in the U.S.A.
* [MC] is available in Canada.
* [E] is available in Switzerland and Scandinavia.
* [EK] is available in United Kingdom.
* [XL] is available in Australia.
* [EG] is available in F.R. Germany.
* [EB] is available in Belgium.
* [EH] is available in Holland.
* [EF] is available in France.
* [Ei] is available in Italy.
* [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
* [PA] is available in far East PX.
* [PE] is available in European Military.
* [PC] is available in European Audio Club.

Numbering System of Resistor

Example

ERD	25	F	J	101
Type	Wattage	Shape	Tolearance	Value
ERX	2	AN	J	2R2
Type	Wattage	Shape	Tolerance	Value

Resistor type	Wattage	Tolerance
ERD: Carbon	25 : 1/4W	F : ±1%
ERG: Metal Oxide	50 : 1/2W	J : ±5%
ERO: Metal Film	1A : 1W	
ERX: Metal Film	2A : 2W	

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Voltage	Value	Tolerance	Peculiarity
ECEA	50	M	R47	R
Type	Voltage	Reculiarity use	Value	Special use

Capacitor Type		Voltage		Tolearnce	
ECEA	: Electrolytic	OJ	: 6.3V	J	: ±5%
ECEB	: Electrolytic	1C	: 16V	K	: ±5%
ECCD	: Ceramic	1E	: 25V	M	: ±20%
ECQM	: Polyester	1H	: 50V	Z	: +80%,−20%
ECQU	: Polyester	1	: 100V		
ECQF	: Polyester	1A	: 125V		
ECNC	: Polyester	4A	: 400V		

Ref. No.		Part No.	Value
RESISTORS			
R1	Ⓢ	ERD25FJ562	5.6K
R2	Ⓢ	ERD25FJ682	6.8K
R3	Ⓢ	ERD25FJ272	2.7K
R4,5	Ⓢ	ERD25FJ471	470
R101	Ⓢ	ERD25FJ103	10K
R102	Ⓢ	ERX1ANJ4R7	4.7
R103	Ⓢ	ERD25FJ472	4.7K
R104	Ⓢ	ERD25TJ473	47K
R105	Ⓢ	ERD25FJ103	10K
R106	Ⓢ	ERD25FJ150	15
R107	Ⓢ	ERX1ANJ1R5	1.5
R108	Ⓢ	ERD25FJ103	10K
R109,110	Ⓢ	ERX1ANJ4R7	4.7
R201	Ⓢ	ERG1ANJ561	560
R202	Ⓢ	ERD25FJ103	10K
R203	Ⓢ	ERD25FJ470	47
R204	Ⓢ	ERD25FJ272	2.7K
R205	Ⓢ	ERD25TJ124	120K
R206	Ⓢ	ERD25TJ183	18K
R207	Ⓢ	ERD25TJ563	56K
R208	Ⓢ	ERD25TJ224	220K
R209	Ⓢ	ERD25TJ334	330K
R210	Ⓢ	ERD25TJ183	18K
R211	Ⓢ	ERD25FJ472	4.7K
R212	Ⓢ	ERD25FJ151	150
R213	Ⓢ	ERD25FJ122	1.2K
R214	Ⓢ	ERD25TJ223	22K
R215	Ⓢ	ERD25FJ472	4.7K
R216	Ⓢ	ERD25TJ154	150K
R217	Ⓢ	ERD25TJ223	22K
R218	Ⓢ	ERD25FJ102	1K
R219	Ⓢ	ERD25FJ332	3.3K
R220	Ⓢ	ERD25FJ221	220
R221	Ⓢ	ERD25FJ471	470
R222	Ⓢ	ERD25FJ391	390
R301	Ⓢ	ER025CKF2701	2.7K
R302	Ⓢ	ERD25FJ471	470
R303	Ⓢ	ERD25FJ822	8.2K
R304	Ⓢ	ERD25FJ561	560
R305	Ⓢ	ERD25FJ181	180
R306	Ⓢ	ERD25TJ223	22K
R307	Ⓢ	ERD25FJ272	2.7K
R401	⚠ Ⓢ	ERD50FJ152	1.5K
R601	⚠ Ⓢ	ERD50FJ4R7	4.7

Ref. No.		Part No.	Value
CAPACITORS			
C1		ECEB1HU471	470
C2		ECEA1EU330	33
C3		ECEA1EU220	22
C5,6		ECQM1223KZ	0.022
C101,102		ECEA1EU330	33
C103		ECEA1EU330	33
C104,105	Ⓢ	ECQM1H104JZ	0.1
C106,107	Ⓢ	ECQM1H104JZ	0.1
C108		ECEA1EU101	100
C109,110	Ⓢ	ECQM1H104JZ	0.1
C111	Ⓢ	ECQM1H562JZ	0.0056
C112		ECEA1HU4R7	4.7
C201		ECEA1CU330	33
C202,203		ECEA1HU010	1
C204	Ⓢ	ECQM1H473JZ	0.047
C205		ECEA0JU221	220
C206		ECEA1HU010	1
C207	Ⓢ	ECCD1H101K	100P
C208	Ⓢ	ECCD1H220K	22P
C209		ECEA1CU101	100
C210	Ⓢ	ECQM1H224JZ	0.22
C211	Ⓢ	ECQM1H473JZ	0.047
C212		ECEA1HU3R3	3.3
C213	Ⓢ	ECCD1H471K	470P
C214		ECEA1CU101	100
C215		ECEA1HU010	1
C216		ECEA1CU470	47
C217,218		ECKD1H104ZF	0.1
C219		ECKD1H104ZF	0.1
C301		ECQK1333GZ	0.033
C302		ECQK1682GZ	0.0068
C303		ECEA1HU010	1
C304		ECEA1CU100	10
C305	Ⓢ	ECQM1H122JZ	0.0012
C306		ECEA1HU010	1
C601 [M]	⚠	ECQF1A473MD	0.047
C601 [MC]	⚠	ECQU1A47ME	0.047
C601 [Other ares]	⚠	ECNC4A473M	0.047

■ REPLACEMENT PARTS LIST

Notes:
1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
3. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.
4. The "Ⓢ" mark is service standard parts and may differ from production parts.
5. The parenthesized numbers in the column of description stand for the quentity per set.
6. Ⓚ-marked parts are used only for SL-1210MK2 (black type). And ○-marked parts are used for SL-1200MK2 (silver type).
7. Parts other than Ⓚ-and ○-marked are used for both SL-1210MK2 and SL-1200MK2.

Areas

* [M] is available in the U.S.A.
* [MC] is available in Canada.
* [E] is available in Switzerland and Scandinavia.
* [EK] is available in United Kingdom.
* [XL] is available in Australia.
* [EG] is available in F.R. Germany.
* [EB] is available in Belgium.
* [EH] is available in Holland.
* [EF] is available in France.
* [Ei] is available in Italy.
* [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
* [PA] is available in far East PX.
* [PE] is available in European Military.
* [PC] is available in European Audio Club.

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC101	AN6675	Turntable Drive
IC201	AN6680	Turntable Control
IC301	AN6682	Pitch Control
IC302	MN4011B	NAND Gate
TRANSISTORS		
Q1	2SD1265	Regulator
Q2,3	2SD637	Regulator
Q201 Ⓢ	2SC1846-R	Regulator
Q202	2SD637	LED Driver
Q203 Ⓢ	2SC1328-T	FG Amp.
DIODES		
D1 ⚠	SVDS1RBA20Z	Rectifier
D2	MA1051	5.1V Zener
D201,202	SVDPR3902S-9	Speed Indicator
D203~206	SVDSLH54VT3	Strobe
D204A	MA162A	Switching
D301	MA1051	5.1V Zener
D401	SVDGL-9NG2	Pitch Indicator

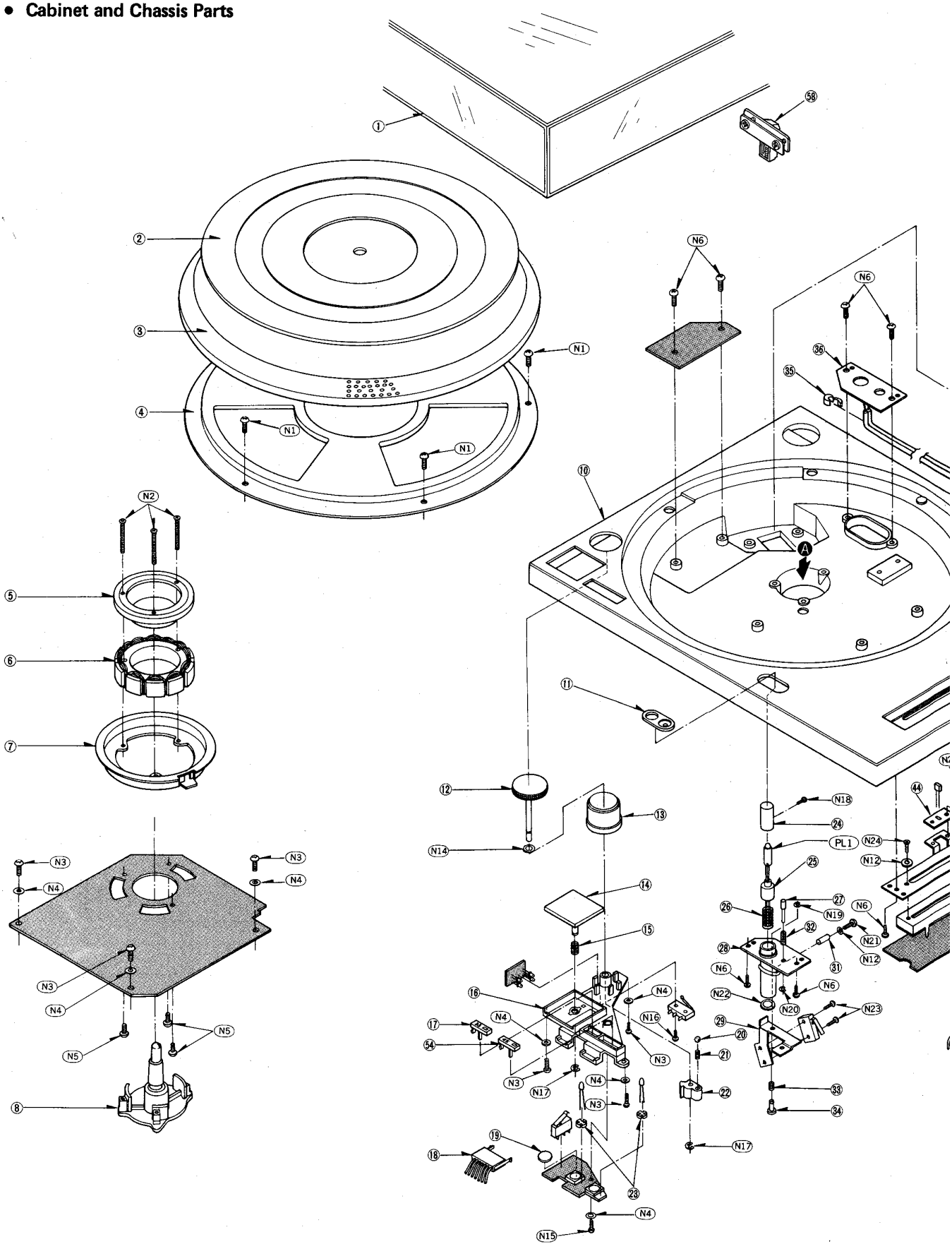
Ref. No.	Part No.	Description
CRYSTAL		
X201	SVQMS4193	4.193MHz Oscillator
VARIABLE RESISTORS		
VR201 Ⓢ	EVTS3MA00B54	Brake Adjustment,50kΩ(B)
VR301	EVMH1GA00B23	Pitch Control±0% Adjustment,2kΩ(B)
VR302 Ⓢ	EVTS3MA00B54	Pitch Control Gain Adjustment,50kΩ(B)
VR303	SFDZ122N11	Pitch Control
SWITCHES		
S201,202	EVQP5R04K	Speed Selector
S203	SFDSSS01GL13	Stort/Stop
S401	SFDSD2MSL-C	Stylus-Illuminator
S601 ⚠	SFDSSS5GL13P	Power
S602 Except for [M,MC] ⚠	SFDSHXW01317	Voltage Selector

Ref. No.	Part No.	Description
LAMP		
PL1 ⚠	SFDN122-01	Stylus Illuminator
TRANSFORMER		
T1 [M] ⚠	SLT66DTL3A	Power Source
T1 [MC] ⚠	SLT66DT14C	Power Source
T1 [Other areas] ⚠	SLT66DTE13E	Power Source
FUSES		
F1 [MC] ⚠	XBA1F12NU14	125V,1.2A
F1 Except for [M,MC] ⚠	XBA2C025T1A	250V,T250mA
F2 Except for [M,MC] ⚠	XBA2C10TR0	250V,T1A

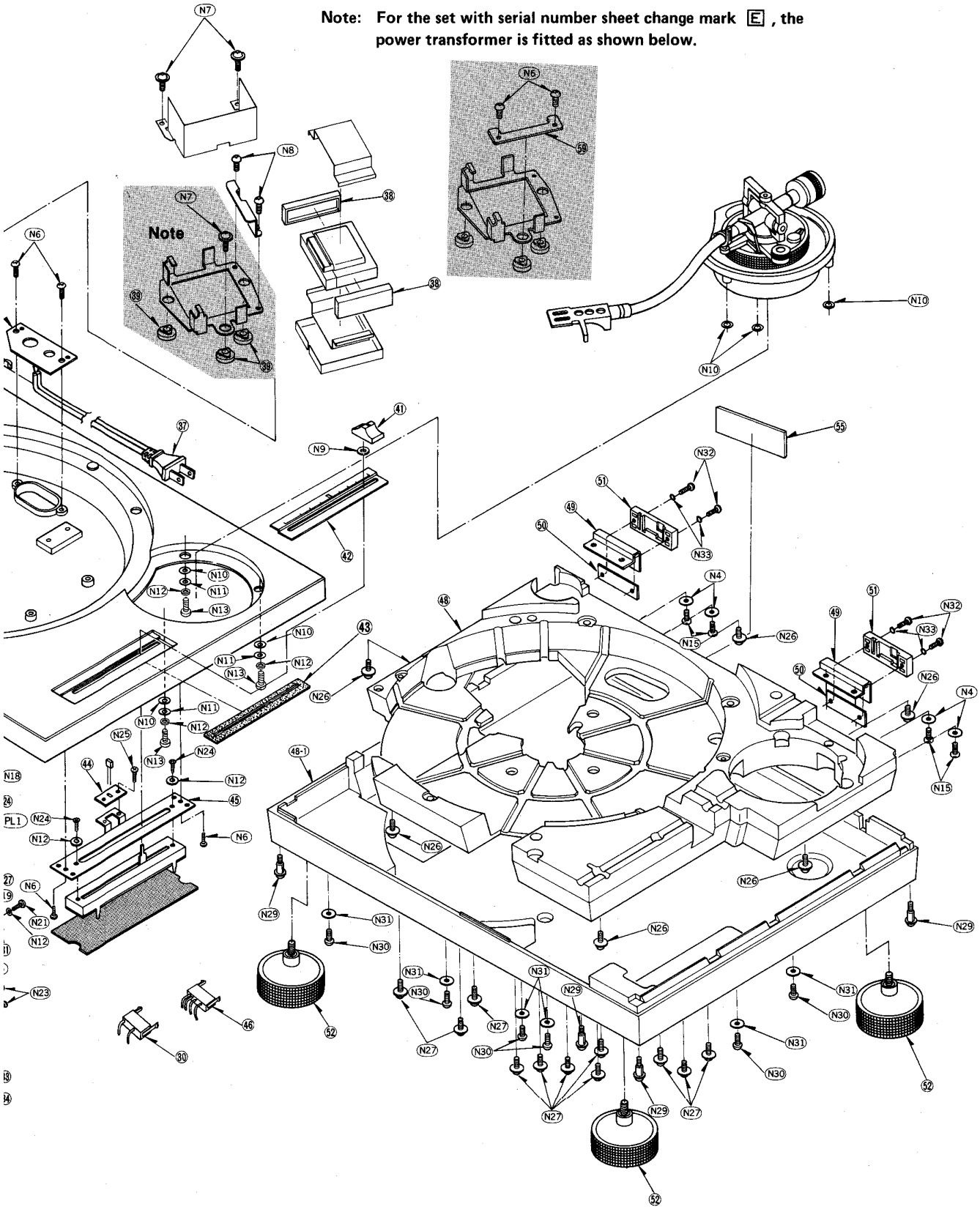
Ref. No.	Part No.	Description
CHABINET AND CHASSIS PARTS		
1	SFAD122-01A	Dust Cover (1)
2	SFTG172-01	Turntable Mat (1)
3	SFTE172-01	Turntable Platter Ass'y (1)
4	SFUM172-05	Cover, Cabinet (1)
5	SFMGQ20-01	Cover, Drive Coil (1)
6	SFMG520-31A	Drive Coil Ass'y (1)
7	SFMZ172-01E	FG Coil Ass'y (1)
8	SFMZQ20-01A	Shaft Ass'y, Turntable (1)
10 ○	SFAC122-01	Cabinet (Silver)
10 Ⓚ	SFAC124S01	Cabinet (Black) (1)
11	SFUM172-04	Ornament, Stylus Illuminator (1)
12	SFKT122-01	Knob, Power Switch (1)
13	SFKK122-01E	Case, Strobe Illuminator (1)
14	SFKT015-06	Button, Start/Stop (1)
15	SFQA122-01	Spring, Start/Stop Button (1)
16	SFUM122-01	Base, Operation (1)
17	SFKT015-01E	Button, Speed (33) (1)
18	SFDJ122-02E	Connector, 7pin (1)
19	SFGZ122-01	Spacer, Rubber (1)
20	SFYB-5-32	Ball, Switch Cam (1)
21	SFQA520-01	Spring, Switch Cam (1)
22	SFUM122-03	Cam, Power Switch (1)
23	SFUM015-11	Spacer, Speed Indicator (2)
24	SFKK172-01	Cover,Stylus Illuminator (1)
25	SFXB122-06	Boss, Drive (1)
26	SFQA172-01	Spring, Drive Boss (1)
27	SFXJ172-01	Pin, Lock Canceler (1)
28	SFUP122-02E	Bracket, Stylus Illuminator (1)
29	SFUP122-03	Plate, Lock Operation (1)
30	SFDJ122-03E	Connector, 3pin (1)
31	SFX0172-01	Pin, Guide (1)
32	SFQA520-01	Spring, Lock Canceler (1)
33	SFQA122-02	Spring, Lock Operation Plate (1)
34	SFXJ172-05	Pin, Lock Operation Plate (1)
35 (M,MC,PA PE,PC)	SFHK040L	Clamper, AC Cord (1)
35 (EK)	SFSR-5N-4	Clamper, AC Cord (1)
35 (Other areas)	SFSR-4N-4	Clamper, AC Cord (1)
36 (M,MC,PA PE,PC)	SFUP122-16	Bracket, AC Cord (1)
36 (Other areas)	SFUP122X01	Bracket, AC Cord (1)
37 ⚠Ⓢ (M,MC)	RJA9Y	AC Cord (1)
37 (EK) ⚠Ⓢ	QFC1205M	AC Cord (1)
37 (XL) ⚠Ⓢ	SJAG23	AC Cord (1)
37 ⚠Ⓢ (PA,PE,PC)	SJA83	AC Cord (1)
37 ⚠Ⓢ (Other areas)	SJA88	AC Cord (1)
38	SFGC122-03	Rubber, Power Transformer (2)
39	SFGC122-01	Cushion, Power Transformer (3)
41	SFKT122-02	Knob, Pitch Control (1)
42 ○	SFKK122-03	Ornament (Silver), Pitch Control (1)
42 Ⓚ	SFKK124S01	Ornament (Black), Pitch Control (1)
43	SFUZ122-01	Felt (1)
44	SFUP122-09	Holder, LED (1)
45	SFUP122-01	Bracket, Pitch Control (1)
46	SFDJ122-01E	Connector, 4pin (1)
48	SFAU122-03	Bottom Base (1)
48-1	SFAU122-02	Bottom Cover (1)
49	SFUP122-23	Supporter (A),Hinge (2)
50	SFUP122-24	Supporter (B), Hinge (2)
51	SFUMM02N04	Case, Hinge (2)
52	SFGC122-02E	Insulator (4)
54	SFKT015-02E	Button, Speed (45) (1)
55 (M) ○	SFNN122M10	Name Plate (1)
55 (MC) ○	SFNN122C10	Name Plate (1)
55 (E) ○	SFNN122S10	Name Plate (1)
55 (EK,XL) ○	SFNN122G10	Name Plate (1)
55 (XA) ○	SFNN122X10	Name Plate (1)
55 (PA,PE) ○	SFNN122P10	Name Plate (1)
55 (PC) ○	SFNN122P11	Name Plate (1)
55 (Other areas) ○	SFNN122N10	Name Plate (1)
55 (E) Ⓚ	SFNN124S10	Name Plate (1)
55 (EG,EH) Ⓚ	SFNN124Q10	Name Plate (1)
58	SFATM02N01A	Hinge (2)
59	SFUP122-25	Plate,Power transformer (1)
TONEARM PARTS		
61	SFPCC31001K	Headshell (1)
62 ○	SFPAM18201K	Tonearm Ass'y (Silver) (1)
62 Ⓚ	SEPAM18202K	Tonearm Ass'y (Black) (1)
63	SFPWG17201K	Balance Weight (1)
64	SFPRT18201K	Lift Ass'y (1)
65	SFPZB17202	Knob, Arm Base Lock (1)
66	SFQA829-03	Spring, Lift Ass'y (1)
67	SFPAB13202	Knob, Arn Lift (1)
68	SFPJL18202K	Oil Damper (1)
70	SFPZB12203	Plate, Arm Base Cover (1)
71	SFUM170-06	Spacer, Phono Cord (1)
72	SFPZB12204	Clamper, Phono Cord (1)
73	SFPAB18201K	Tonearm Fixing Plate (1)
74	SFPZB12201K	Plate (1)
75	SFDH122-05	Phono Cord (1)
76	SFEL028-01E	Ground Wire (1)
77	SFPRT17201K	Arm Rest (1)
78 ○	SFPKD17203	Arm Base (Silver) (1)
78 Ⓚ	SFPKD17205	Arm Base (Black) (1)
79	SFPKB17204E	Ring,Arm Base Operation (1)
80	SFPKD12201	Bracket, Arm Base (1)
81	SFPAB17206	Knob, Anti-Skating (1)
82 ○	SFGK132-01	Cap (Silver) (1)
82 Ⓚ	SFGK133S01	Cap (Black) (1)
SCREW,NUT AND WASHERS		
N1 Ⓢ	XTN3+8BFZ	Screw (5)
N2	SFXGQ20-02	Screw (3)
N3 Ⓢ	XTN3+8B	Screw (8)
N4 Ⓢ	XWG3	Washer (12)
N5 Ⓢ	XTN26+6B	Screw (3)
N6 Ⓢ	XTV3+8BFN	Screw (8)
N7	SFXG172-01	Screw (3)
N8	XTN3+5J	Screw (2)
N9	SFXW172-03	Washer (1)
N10	SFPEW11003	Washer (6)
N11 Ⓢ	XWE3E10	Washer (3)
N12 Ⓢ	XWA3B	Washer (8)
N13 Ⓢ	XSN3+10S	Screw (3)
N14	SFXW910J02	Washer (1)
N15 Ⓢ	XTN3+10B	Screw (5)
N16 Ⓢ	XTN2+10B	Screw (1)
N17 Ⓢ	XUC3FT	Circlip (2)
N18	XSN17+3FY	Screw (1)
N19 Ⓢ	XUC2FT	Circlip (1)
N20 Ⓢ	XUC25FT	Circlip (1)
N21 Ⓢ	XSN3+14S	Screw (1)
N22	RTW-12	Circlip (1)
N23 Ⓢ	XSN2+10	Screw (2)
N24 Ⓢ	XSN3+6S	Screw (2)
N25 Ⓢ	XTN3+6B	Screw (5)
N26	XTWS3+14TFZ	Screw (6)
N27	SFXG122-02	Screw (11)
N29	SFXG122-01	Screw (4)
N30	XTN3+14QFZ	Screw (6)
N31 Ⓢ	XWG3FZ	Washer (6)
N32 Ⓢ	XSN3+14BVS	Screw (4)
N33 Ⓢ	XWA3BFZ	Washer (4)
N34	SFXG829-1	Screw (1)
N35 Ⓢ	XSN3+8S	Screw (2)
N36 Ⓢ	XUC5FT	Circlip (1)
N37	SFPEV17202	Screw (3)
N38 Ⓢ	XTN3+25B	Screw (1)
N39	SFPEW1100	Washer (1)
N40 Ⓢ	XSN3+6BVS	Screw (4)
N41 Ⓢ	XWC3BFZ	Washer (1)
N42 Ⓢ	XSN3+12BVS	Screw (2)
N43 Ⓢ	XWG3FZ	Washer (2)
N44	SFXW701-02	Washer (1)
N45	SFPEW00705	Washer (4)
N46	XTW26+5E	Screw (1)
ACCESSORIES		
A1 (M)	SFNU122M06	Instruction Book (1)
A1 (MC)	SFNU122C06	Instruction Book (1)
A1 (E,EB,EC)	SFNU122S01	Instruction Book (1)
A1 (EK)	SFNU122G01	Instruction Book (1)
A1 (PA, PE,PC)	SFNU122P01	Instruction Book (1)
A1 (Other areas)	SFNU122X01	Instruction Book (1)
A2	SFWE010	45 Adaptor (1)
A3	SFPEN3302	Nut,Cartridge (2)
A4	SFPEW9601	Washer,Cartridge (2)
A5	SFCZV8801	Screw,Cartridge (2)
A6	SFPEV9801	Screw,Cartridge (2)
A7	SFK0135-01	Overhang Gauge (1)
A8	SFPZB3501	Shell Weight (1)
A9 ⚠ (XA) Only	SFDKI19118	2pin Plug (1)
A10	SFPWG17202	Sub-weight (1)
A11 ⚠ (PA,PE, PC) Only	QJP0603S	Adaptor, Gimens
PACKING PARTS		
P1 (MC, EF) ○	SFHP122C02	Carton Box (Silver) (1)
P1 (Other areas) ○	SFHP122M02	Carton Box (Silver) (1)
P1 Ⓚ	SFHP124S02	Carton Box (Black) (1)
P2	SFHH122-01	Pad, Front (1)
P3	SFHH122-02	Pad, Rear (1)
P4	SFHD122N05	Pad, Top (1)
P5	SFHD122-02	Pad (A), Turntable (1)
P6	SFHD122N06	Pad (B), Turntable (1)
P7	SFYH60X60	Polyethylene Bag, Unit& Dust Cover (2)
P8	SFYH40X45	Polyethylene Bag, Turntable (1)
P9	SPB1083	Polyethylene Bag, Accessories (3)
P10	SPJ15	Polyethylene Bag, Shell Weight (1)
P11	SFHZD03M01	Cover Sheet, Dust Cover (1)
P12	SFHZ122-01	Cover Sheet, 45Adaptor (1)
P13	SPP189	Cover Sheet, Cords (2)

■ EXPLODED VIEWS

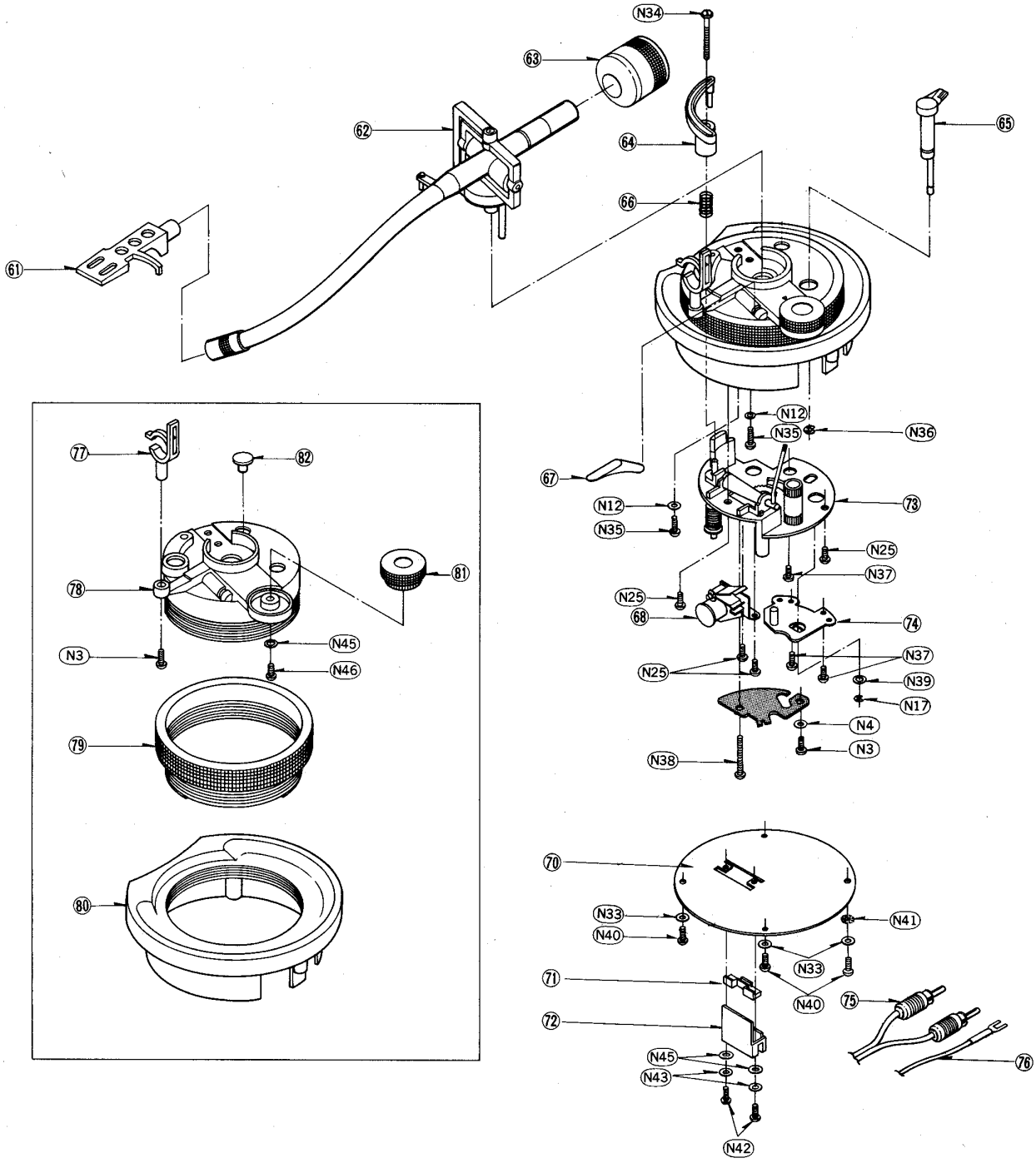
- **Cabinet and Chassis Parts**



Note: For the set with serial number sheet change mark [E], the power transformer is fitted as shown below.



- **Tonearm Parts**



■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

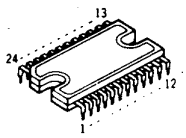
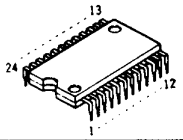
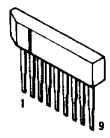
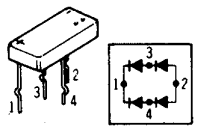
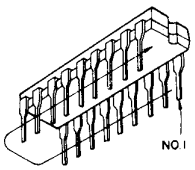
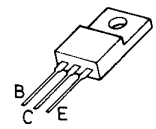
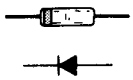
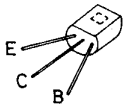
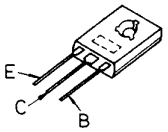
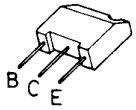
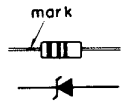
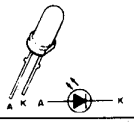
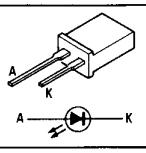
Notes:

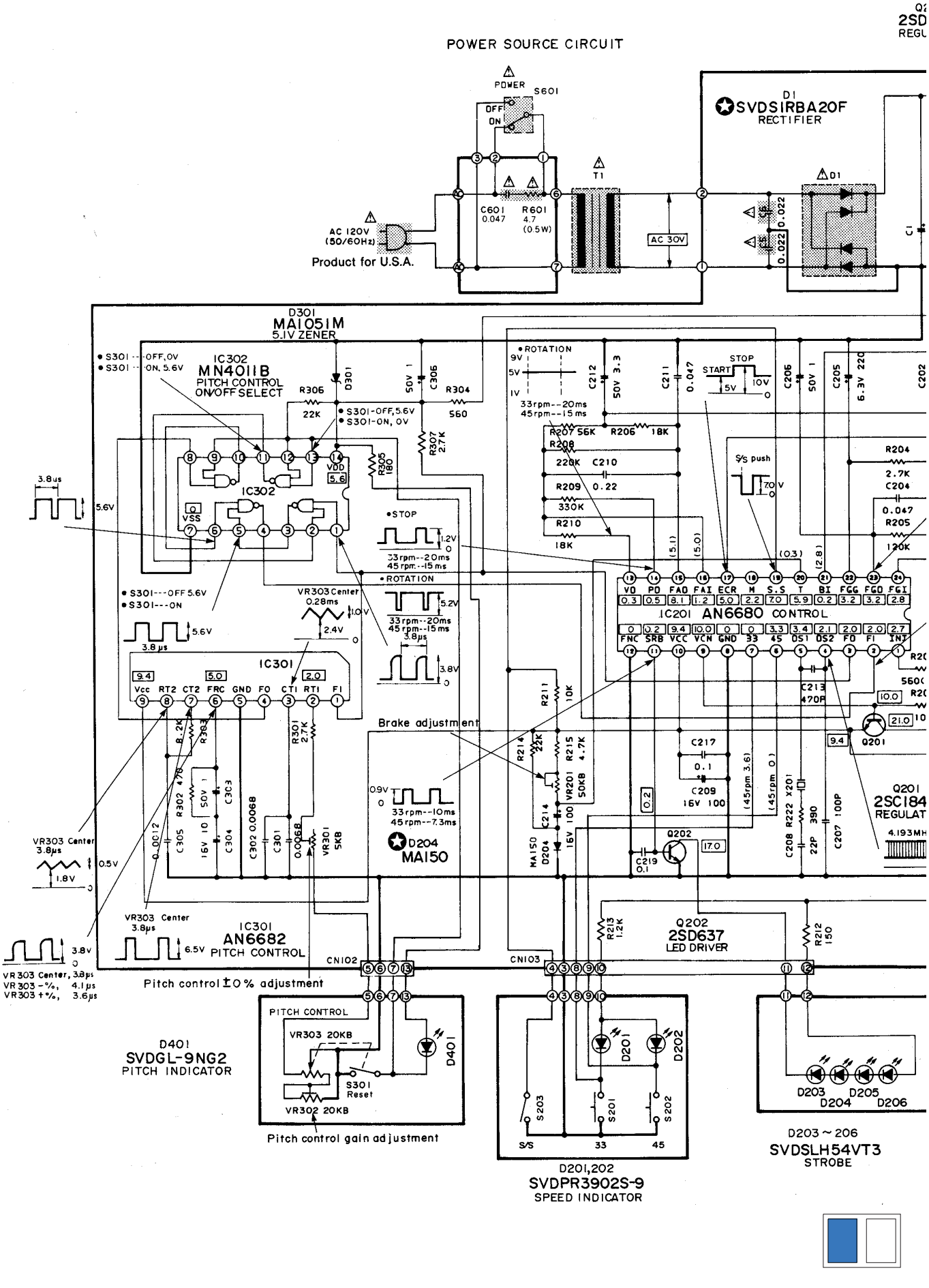
1. **S201, 202** : Speed selector switch.
2. **S203** : Start/stop switch.
3. **S301** : Pitch control reset switch in "**off**" position.
4. **S401** : Stylus illuminator switch in "**off**" position.
5. **S601** : Power switch in "**on**" position.
6. **S602** : Voltage selector in "**220 – 240**" position.
7. The voltage value, and waveforms are the reference voltage values of this unit measured by DC electronic voltmeter (high-impedance) and oscilloscope on the basis of chassis. Therefore, the voltage value and waveform may include some error due to the internal impedance of the tester or the measuring set.
   * [ ] is the voltage when turntable is in stop.
   *( ) is the voltage when turntable is in rotation. (at 33 rpm)
8. ——— +B voltage lines.
9. Important safety notice.
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
10. The part No. of diodes mentioned in the schematic diagram stand for production part No. Regarding the part No. with ✪ mark the production part No. are different from the replacement part No. Therefore, when placing an order for replacement part, please use the part No. in the replacement parts list.

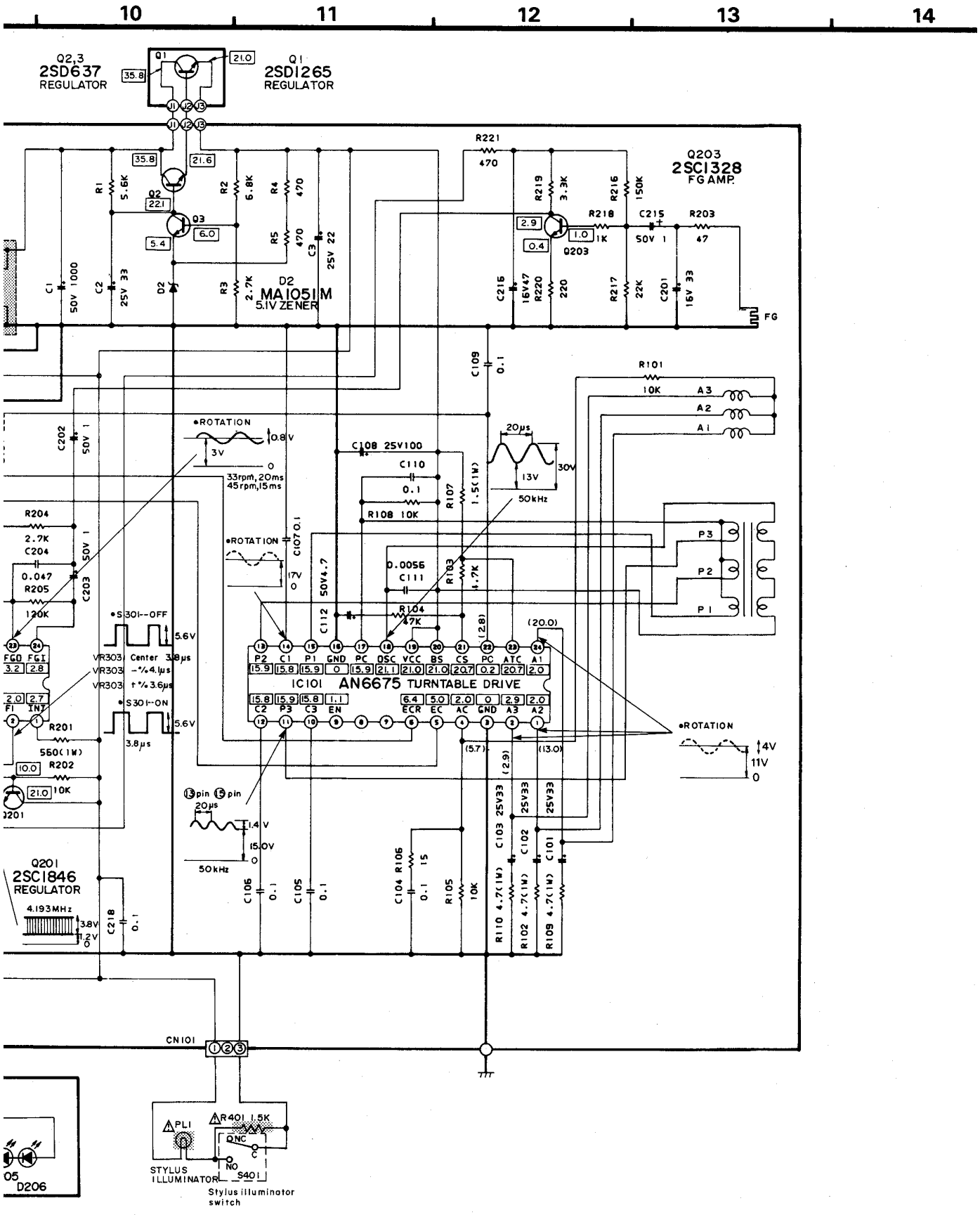
IMPORTANT SAFETY NOTICE

The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards.
When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.

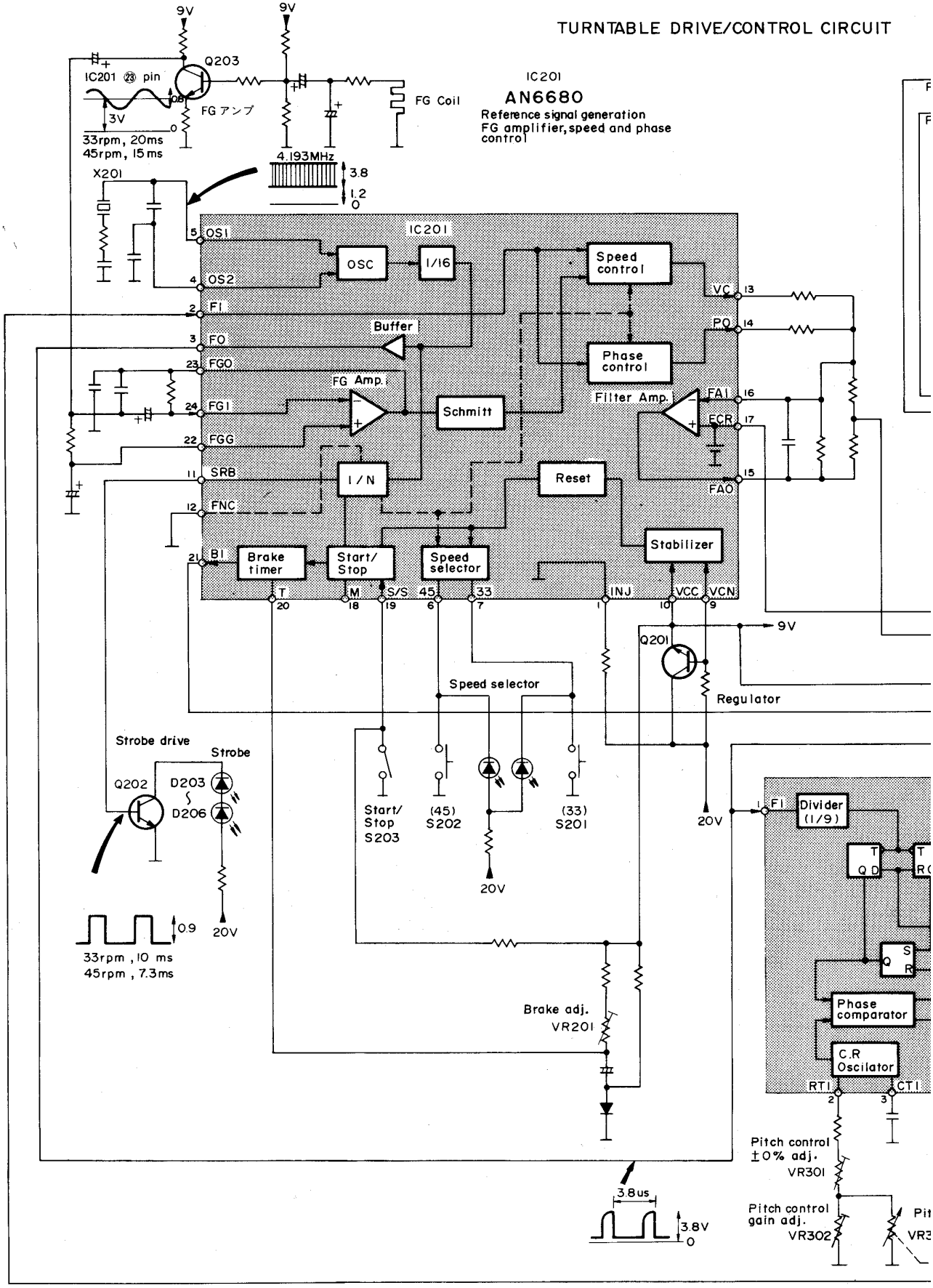
• Terminal guide of transistors, diodes and IC's

AN6675	AN6680	AN6682	SVDS1RBA20F
			
MN4011B 14 Pin		2SD1265	MA150
			
2SC1328	2SC1846	2SD637 2SB641 2SD636 2SB643	MA1051
			
SVDPR3902S-9 SVDSLH54VT3	SVDGL-9PG2		
			

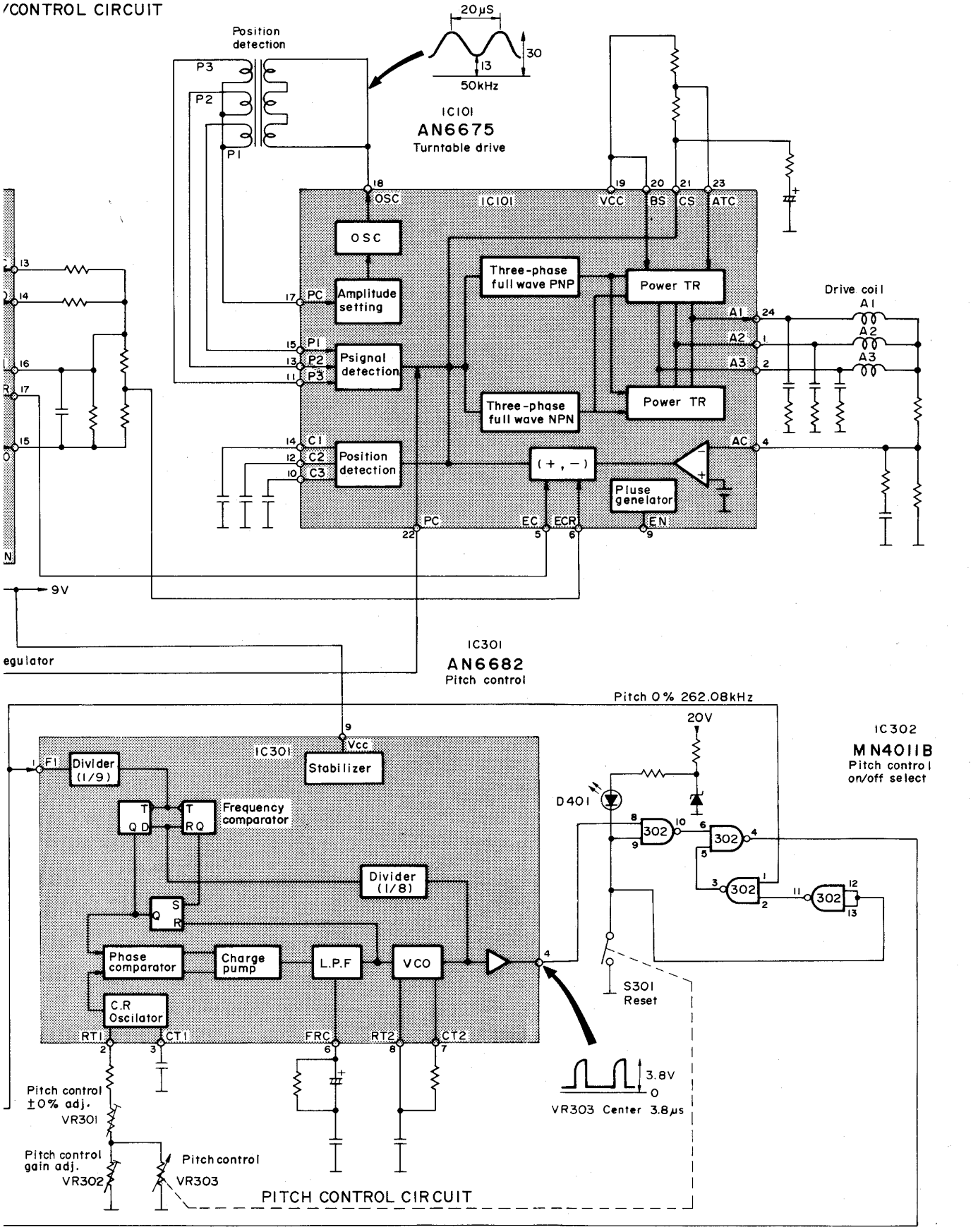

POWER SOURCE CIRCUIT
POWER
S601
OFF
ON
T1
D1
SVDSIRBA20F
RECTIFIER
C601 0.047
R601 4.7 (0.5W)
AC 120V (50/60Hz)
Product for U.S.A.
AC 30V
C1B 0.022
C1A 0.022
C1
D301
MA1051M
5.1V ZENER
IC302
MN4011B
PITCH CONTROL
ON/OFF SELECT
• S301---OFF, 0V
• S301---ON, 5.6V
R306 22K
R304 560
R307 2.7K
R305 180
C306 50V 1
• S301-OFF, 5.6V
• S301-ON, 0V
VDD 5.6
VSS
• ROTATION
33rpm--20ms
45rpm--15ms
• STOP
1.2V
3.8µs
5.6V
VR303 Center
0.28ms
1.0V
2.4V
5.2V
3.8V
IC301
Vcc RT2 CT2 FRC GND FO CTI RTI FI
R302 4.7K
C305 0.0012
C304 16V 10
C303 50V 1
C302 0.0068
C301 0.0068
VR301 5KB
R301 2.7K
R303 8.2K
VR303 Center 3.8µs
1.8V
0.5V
6.5V
IC301
AN6682
PITCH CONTROL
VR303 Center, 3.8µs
VR303 -%, 4.1µs
VR303 +%, 3.6µs
Pitch control ±0% adjustment
CN102
CN103
D401
SVDGL-9NG2
PITCH INDICATOR
PITCH CONTROL
VR303 20KB
S301 Reset
VR302 20KB
Pitch control gain adjustment
Brake adjustment
R211 10K
R214 22K
R215 4.7K
VR201 50KB
C214 16V 100
D204 MA150
0.9V
33rpm--10ms
45rpm--7.3ms
R207 56K
R206 18K
R208 220K
C210 0.22
R209 330K
R210 18K
C211 0.047
C212 50V 3.3
C205 6.3V 220
C206 50V 1
C202
START
STOP
10V
5V
S/S push
7.0V
R204 2.7K
C204 0.047
R205 120K
IC201
AN6680
CONTROL
VD PD FAD FAI ECR M S.S T BI FGG FGD FGI
FNC SRB VCC VCN GND 33 45 OS1 OS2 FO FI INT
C213 470P
Q201
2SC184
REGULAT
4.193MH
C217 0.1
C209 16V 100
(45rpm 3.6)
(45rpm 0)
C208 22P
R222 390
C207 100P
Q202
2SD637
LED DRIVER
C219 0.1
R213 1.2K
R212 150
D201 D202
S203 S201 S202
S/S 33 45
D201,202
SVDPR3902S-9
SPEED INDICATOR
D203 D205
D204 D206
D203~206
SVDSLH54VT3
STROBE


10
11
12
13
14
Q2,3
2SD637
REGULATOR
Q1
2SD1265
REGULATOR
Q203
2SC1328
FG AMP.
MA1051M
5.1V ZENER
FG
ROTATION
33rpm, 20ms
45rpm, 15ms
50kHz
IC101 AN6675 TURNTABLE DRIVE
P2 C1 P1 GND PC OSC VCC BS CS PC ATC A1
C2 P3 C3 EN ECR EC AC GND A3 A2
A3
A2
A1
P3
P2
P1
S301--OFF
S301--ON
5.6V
3.8μs
VR303 Center 3.8μs
VR303 -%4.1μs
VR303 +%3.6μs
Q201
2SC1846
REGULATOR
4.193MHz
CN101
PL1
R401 1.5K
S401
STYLUS ILLUMINATOR
Stylus illuminator switch
D206

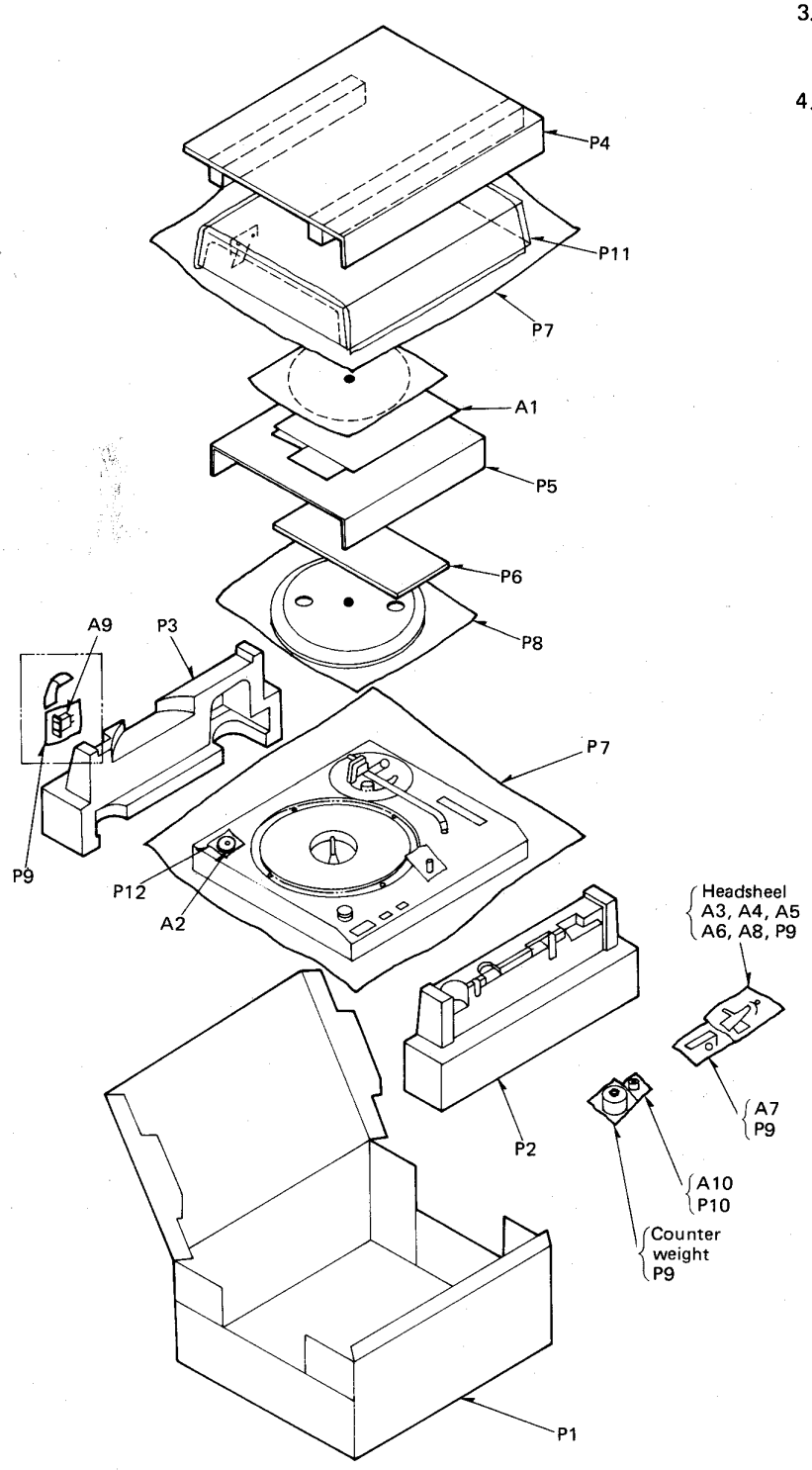
■ BLOCK DIAGRAM



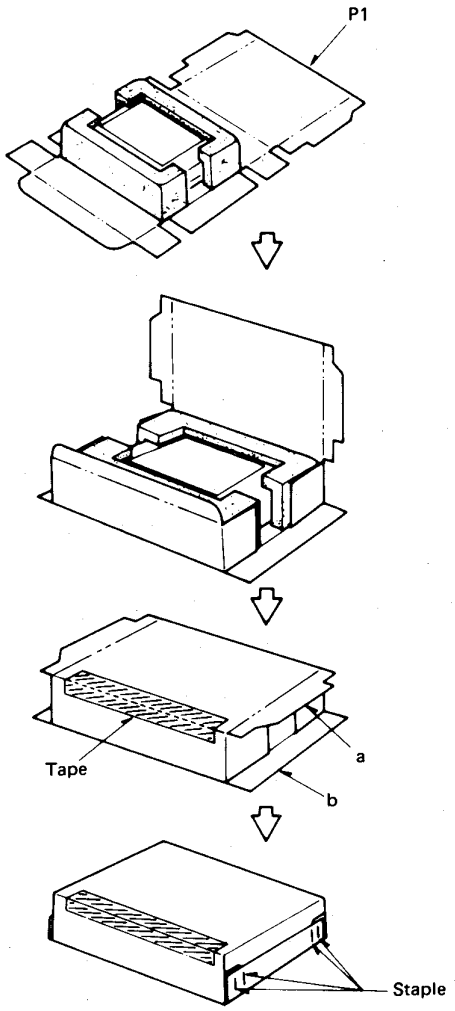
/CONTROL CIRCUIT



■ PACKING



1. Plase the unit (with cushions attached) as illustrated.
2. Fold the flaps according to the line marks.
3. Seal the top with adhesive tape.
   * Use gum tape or adhesive cloth tape of 50mm wide at least
4. For the edges, first fold the flap "a" and then flap "b", and staple. Remember to staple only flap "b". (Use 15 or 16mm staple)



* Stapling positions are shown below.